SEQUENCE LISTING

<110> Buck, Linda
Axel, Richard

<120> ODORANT RECEPTORS AND USES THEREOF

<130> 0575/38586-B/JPW/ADM

<150> US 08/129,079
<151> 1993-10-05

<160> 80

<170> PatentIn version 3.0

<210> 1
<211> 954
<212> DNA
<213> Rattus sp. F12

<400> 1
atggaatcag ggaacagcac aagaagattt tcaagttttt ttcttcttgg atttacagaa 60

aacccacaac ttcacttcct catttttgca ctattcctgt ccatgtacct ggtaacagtg 120

cttgggaacc tgcttatcat tatggccatc atcacacagt ctcatttgca tacacccatg 180

tacttttttcc ttgctaacct atcctttgtg gacatctgtt tcacctccac caccatccca 240

aagatgttgg taaatatata cacccagagc aagagcatca cctatgaaga ctgtattagc 300

cagatgtgtg tcttcttggt tttcgcagaa ttgggcaact ttctcctggc tgtgatggcc 360

tatgaccgat atgtggctaa ctgtcaccca ctgtgttaca cagtcattgt gaaccaccgg 420

ctctgtatcc tgctgcttct gctgtcctgg gttatcagca ttttccatgc cttcatacag 480

agcttaattg tgctacagtt gaccttctgt ggagatgtga aaatccctca cttcttctgt 540

gaacttaatc agctgtccca actcacctgt tcagacaact ttccaagtca cctcataatg 600

aatcttgtac ctgttatgtt ggcagccatt tccttcagtg gcatccttta ctcttatttc 660

aagatagtat cctccataca ttctatctcc acagttcagg ggaagtacaa ggcattttct 720

acttgtgcct ctcacctttc cattgtctcc ttattttata gtacaggcct cggagtgtac 780

gtcagttctg ctgtggtcca aagctcacat tctgctgcaa gtgcttcggt catgtatact 840

gtggtcaccc ccatgctgaa ccccttcatt tatagtctaa ggaataaaga tgtgaagaga 900

gctctggaaa gactgttaga aggaaactgt aaagtgcatc attggactgg atga 954

<210> 2
<211> 1002
<212> DNA
<213> Rattus sp. F3

<400> 2
atggactcaa gcaacaggac aagagtttca gaatttcttc ttcttggatt tgtagaaaac 60

aaagacctac aacccttat ttatggtctt tttctctcta tgtacctggt tactgtcatt 120

ggaaacatat ccattattgt ggctatcatt tcagatccct gtctgcacac ccccatgtat 180

ttcttcctct ctaacctgtc ctttgtggac atctgtttca tttcaaccac tgttccaaag 240

atgttagtga acatccagac ccaaaacaat gtcatcacct atgcaggatg cattacccag 300

atatactttt tcttgctctt tgtagaattg gacaacttct tgctgactat catggcctat 360

gaccgttacg tagccatctg tcaccccatg cactacacag ttatcatgaa ctacaagctc 420

tgtggatttc tggttctggt atcttggatt gtaagtgttc tgcatgcctt gtttcaaagc 480

ttgatgatgt tggcgctgcc cttctgcaca catctggaaa tcccacacta cttctgtgaa 540

cctaatcagg tgattcaact cacctgttct gatgcatttc ttaatgatct tgtgatatat 600

tttacacttg tgctgctggc tactgttcct cttgctggca tcttctattc ttacttcaag 660

atagtgtcct ccatatgtgc tatatcgtca gttcatggga agtacaaagc attctccacc 720

tgtgcatctc acctttcagt cgtgtcttta ttttactgca caggactagg agtgtacctc 780

agttctgctg caaacaacag ctcacaggca agtgccacag cctcagtcat gtacactgta 840

gttaccccta tggtgaaccc ttttatctat agtcttagga ataaagatgt taagagtgtt 900

ctgaaaaaaa ctctttgtga ggaagttata aggagtccac cttccctact tcatttcttc 960

ctagtgttat gtcatctccc ttgttttatt ttttgttatt aa 1002

<210> 3
<211> 942
<212> DNA
<213> Rattus sp. F5

<400> 3
atgagcagca ccaaccagtc cagtgtcacc gagttcctcc tcctgggact ctccaggcag 60

ccccagcagc agcagctcct cttcctgctc ttcctcatca tgtacctggc cactgtcctg 120

ggaaacctgc tcatcatcct ggctattggc acagactccc gcctgcacac ccccatgtac 180

ttcttcctca gtaacctgtc ctttgtggat gtctgcttct cctctaccac tgtccctaaa 240

gttctggcca accatatact tgggagtcag gccatttcct tctctgggtg tctcacccag 300

ctgtattttc tcgctgtgtt tggtaacatg gacaatttcc tgctggctgt gatgtcctat 360

gaccgatttg tggccatatg ccacccttta cactacacaa caaagatgac ccgtcagctc 420

tgtgtcctgc ttgttgtggg gtcatgggtt gtagccaaca tgaattgtct gttgcacata 480

ctgctcatgg ctcgactctc cttctgtgca gacaacatga tcccccactt cttctgtgat 540

ggaactcccc tcctgaaact ctcctgctca gacacacatc tcaatgagct gatgattctt 600

acagagggag ctgtggtcat ggtcacccca tttgtctgca tcctcatctc ctacatccac 660

atcacctgtg ctgtcctcag agtctcatcc cccaggggag gatggaaatc cttctccacc 720

tgtggctccc acctggctgt ggtctgcctc ttctatggca ccgtcatcgc tgtgtatttc 780

aacccatcat cctctcactt agctgggagg gacatggcag ctgcagtgat gtatgcagtg 840

gtgaccccaa tgctgaaccc tttcatctat agcctgagga acagcgacat gaaagcagct 900

ttaaggaaag tgctcgccat gagatttcca tctaagcagt aa 942

<210> 4
<211> 936
<212> DNA
<213> Rattus sp. F6

<400> 4
atggcttgga gtactggcca gaacctgtcc acaccaggac cattcatctt gctgggcttc 60

ccagggccaa ggagcatgcg cattgggctc ttcctgcttt tcctggtcat gtatctgctt 120

acggtagttg gaaacctagc catcatctcc ctggtaggtg cccacagatg cctacagaca 180

cccatgtact tcttcctctg caacctctcc ttcctggaga tctggttcac cacagcctgc 240

gtacccaaga ccctggccac atttgcgcct cggggtggag tcatttcctt ggctggctgt 300

gccacacaga tgtactttgt cttttctttg ggctgtaccg agtacttcct gctggctgtg 360

atggcttatg accgctacct ggccatctgc ctgccactgc gctatggtgg catcatgact 420

cctgggctgg cgatgcggtt ggccctggga tcctggctgt gtgggttttc tgcaatcaca 480

gttcctgcta ccctcattgc ccgcctctct ttctgtggct cacgtgtcat caaccacttc 540

ttctgtgaca tttcgccctg gatagtgctt tcctgcaccg acacgcaggt ggtggaactg 600

gtgtcctttg gcattgcctt ctgtgttatt ctgggctcgt gtggtatcac actagtctcc 660

tatgcttaca tcatcactac catcatcaag attccctctg cccggggccg gcaccgcgcc 720

ttctcaacct gctcatccca tctcactgtg gtgctgattt ggtatggctc caccatcttc 780

ttgcatgtga ggacctcggt agagagctcc ttggacctca ccaaagctat cacagtgctc 840

aacaccattg tcacacctgt gctgaaccct ttcatatata ctctgaggaa caaggatgtc 900

aaggaagctc tgcgcaggac ggtgaagggg aagtga 936

<210> 5
<211> 939
<212> DNA

<213> Rattus sp. I14

<400> 5
atgactggaa ataaccaaac tttgatcttg gagttcctcc tcctgggtct gcccatccca 60

tcagagtatc atctcctgtt ctatgccctg ttcctggcca tgtacctcac catcatcctg 120

ggaaacctgc taatcattgt ccttgttcga ctggactctc atctccacat gcccatgtac 180

ttgtttctca gcaacttgtc cttctctgac ctctgctttt cctctgtcac aatgcccaaa 240

ttgcttcaga acatgcagag ccaagtacca tctatatcct atacaggctg cctgacacag 300

ctgtacttct ttatggtttt tggagatatg gagagcttcc ttcttgtggt catggcctat 360

gaccgctatg tggccatttg ctttcctttg cgttacacca ccatcatgag caccaagttc 420

tgtgcttcac tagtgctact tctgtggatg ctgacgatga cccatgccct gctgcatacc 480

ctactcattg ctagattgtc tttttgtgag aagaatgtga ttcttcactt tttctgtgac 540

atttctgctc ttctgaagtt gtcctgctca gacatttatg ttaatgagct gatgatatat 600

atcttgggtg gactcatcat tattatccca ttcctattaa ttgttatgtc ctatgttaga 660

attttcttct ccattttgaa gtttccatct attcaggaca tctacaaggt attctcaacc 720

tgtggttccc atctgtctgt ggtgaccttg ttttatggga caatttttgg tatctactta 780

tgtccatcag gtaataattc tactgtgaag gagattgcca tggctatgat gtacacagtg 840

gtgactccca tgctgaatcc cttcatctac agcctgagga acagagacat gaaaagggcc 900

ctaataagag ttatctgcac taagaaaatc tctctgtaa 939

<210> 6
<211> 945
<212> DNA
<213> Rattus sp. I15

<400> 6
atgacagaag agaaccaaac tgtgatctcc cagttccttc tccttttcct gcccatcccc 60

tcagagcacc agcacgtgtt ctacgccctg ttcctgtcca tgtacctcac cactgtcctg 120

gggaacctca tcatcatcat cctcattcac ctggactccc atctccacac acccatgtac 180

ttgtttctca gcaacttgtc cttctctgat ctctgctttt cctctgttac gatgcccaag 240

ttgttgcaga acatgcagag ccaagttcca tccatcccct ttgcaggctg cctgacacaa 300

ttatactttt acctgtattt tgcagacctt gagagcttcc tgcttgtggc catggcctat 360

gaccgctatg tggccatctg cttccccctt cattacatga gcatcatgag ccccaagctc 420

tgtgtgagtc tggtggtgct gtcctgggtg ctgaccacct tccatgccat gctgcacacc 480

ctgctcatgg ccagattgtc attctgtgcg gacaatatga tcccccactt tttctgtgat 540

atatctcctt tattgaaact gtcctgctct gacacgcatg ttaatgagtt ggtgatattt 600

gtcatgggag ggcttgttat tgtcattcca tttgtgctca tcattgtatc ttatgcacga 660

gttgtcgcct ccattcttaa agtcccttct gtccgaggca tccacaagat cttctccacc 720

tgcggctccc atctgtctgt ggtgtcactg ttctatggga caatcattgg tctctactta 780

tgtccgtcag ctaataactc tactgtgaag gagactgtca tggccatgat gtacacagtg 840

gtgaccccca tgctgaaccc cttcatctac agcctgagga acagagacat gaaagaggca 900

ctgataagag tcctttgtaa aaagaaaatt accttctgtc tatga 945

<210> 7
<211> 933
<212> DNA
<213> Rattus sp. I3

<400> 7
atgaacaatc aaactttcat cacccaattc cttctcctgg gactgcccat ccctgaagaa 60

catcagcacc tgttctatgc cttgttcctg gtcatgtacc tcaccaccat cttgggaaac 120

ttgctaatca ttgtacttgt tcaactggac tcccagctcc acacacctat gtatttgttt 180

ctcagcaatt tgtctttctc tgatctatgt ttttcctctg tcacaatgcc caagctgctg 240

cagaacatga ggagccagga cacatccatt ccctatggag gctgcctggc acaaacatac 300

ttctttatgg tttttggaga tatggagagt ttccttcttg tggccatggc ctatgaccgc 360

tatgtggcca tctgcttccc tctgcattac accagcatca tgagccccaa gctctgtact 420

tgtctagtgc tgttattgtg gatgctgacg acatcccatg ccatgatgca cacactgctt 480

gcagcaagat tgtcttttg tgagaacaat gtggtcctca acttcttctg tgacctattt 540

gttctcctaa agctggcctg ctcagacact tatattaatg agttgatgat atttatcatg 600

agtacactcc tcattattat tccattcttc ctcattgtta tgtcctatgc aaggatcata 660

tcctctattc ttaaggttcc atctacccaa ggcatctgca aggtcttctc tacctgtggt 720

tcccatctgt ctgtagtatc actgttctat gggacaatta ttggtctcta cttatgtcca 780

gcaggtaata attccactgt aaaagagatg gtcatggcca tgatgtacac tgtggtgacc 840

cccatgctga atcccttcat ctacagccta aggaatagag atatgaagag ggccctaata 900

agagttatct gtagtatgaa aatcactctg taa 933

<210> 8
<211> 984
<212> DNA
<213> Rattus sp. I7

<400> 8
atggagcgaa ggaaccacag tgggagagtg agtgaatttg tgttgctggg tttcccagct 60

cctgccccac tgcgagtact actatttttc ctttctcttc tggactatgt gttggtgttg 120

actgaaaaca tgctcatcat tatagcaatt aggaaccacc caaccctcca caaacccatg 180

tatttttct tggctaatat gtcatttctg gagatttggt atgtcactgt tacgattcct 240

aagatgctcg ctggcttcat tggttccaag gagaaccatg gacagctgat ctcctttgag 300

gcatgcatga cacaactcta ctttttcctg ggcttgggtt gcacagagtg tgtccttctt 360

gctgtgatgg cctatgaccg ctatgtggct atctgtcatc cactccacta ccccgtcatt 420

gtcagtagcc ggctatgtgt gcagatggca gctggatcct gggctggagg ttttggtatc 480

tccatggtta aagttttcct tatttctcgc ctgtcttact gtggccccaa caccatcaac 540

cacttttct gtgatgtgtc tccattgctc aacctgtcat gcactgacat gtccacagca 600

gagcttacag actttgtcct ggccattttt attctgctgg gaccgctctc tgtcactggg 660

gcatcctaca tggccatcac aggtgctgtg atgcgcatcc cctcagctgc tggccgccat 720

aaagcctttt caacctgtgc ctcccacctc actgttgtga tcatcttcta tgcagccagt 780

attttcatct atgccaggcc taaggcactc tcagcttttg acaccaacaa gctggtctct 840

gtactctacg ctgtcattgt accgttgttc aatcccatca tctactgctt gcgcaaccaa 900

gatgtcaaaa gagcgctacg tcgcacgctg cacctggccc aggaccagga ggccaatacc 960

aacaaaggca gcaaaattgg ttag 984

<210> 9
<211> 939
<212> DNA
<213> Rattus sp. I8

<400> 9
atgaacaaca aaactgtcat cacccatttc ctcctcctgg gattgcccat ccccccagag 60

caccagcaac tgttctttgc cctgttcctg atcatgtacc tcaccacctt tctgggaaac 120

ctgctaattg ttgtccttgt tcaactggac tctcatctcc acacacccat gtacttgttt 180

ctcagcaact tgtccttctc tgatctctgc ttttcctctg ttacaatgct gaaattgctg 240

caaaatatac agagccaagt accatctata tcctatgcag gatgcctgac acagatattc 300

ttctttttgt tgtttggcta ccttgggaat ttccttcttg tagccatggc ctatgaccgc 360

tatgtggcca tctgcttccc tctgcattat accaacatca tgagccataa gctctgtact 420

tgtctcctgc tggtattttg gataatgaca tcatctcatg ccatgatgca caccctgctt 480

gcagcaagat tgtctttttg tgagaacaat gtactcctca acttttttctg tgacctgttt 540

gttctcctaa agttggcctg ctcagacact tatgttaatg agttgatgat acatatcatg 600

ggcgtgatca tcattgttat tccattcgtg ctcattgtta tatcctatgc caagatcatc 660

tcctccattc ttaaggttcc atctactcaa agcattcaca aggtcttctc cacttgtggt 720

tctcatctct ctgtggtgtc tctgttctac gggacaatta ttggtctcta tttatgtcca 780

tcaggtgata attttagtct aaaggggtct gccatggcta tgatgtacac agtggtaact 840

ccaatgctga acccgttcat ctacagccta agaaacagag acatgaagca ggccctaata 900

agagttacct gtagcaagaa aatctctctg ccatggtag 939

<210> 10
<211> 945
<212> DNA
<213> Rattus sp. I9

<400> 10
atgactagaa gaaaccaaac tgccatctct cagttcttcc ttctgggcct gccattcccc 60

ccagagtacc aacacctgtt ctatgccctg ttcctggcca tgtacctcac cactctcctg 120

gggaacctca tcatcatcat cctcattcta ctggactccc atctccacac acccatgtac 180

ttgtttctca gcaatttatc ctttgccgac ctctgttttt cctctgtcac aatgcccaag 240

ttgttgcaga acatgcagag ccaagttcca tccatcccct atgcagggtg cctggcacag 300

atatacttct ttctgttttt tggagacctt ggaaacttcc tgcttgtggc catggcctat 360

gaccgctatg tggccatctg cttccccctt cattacatga gcatcatgag ccccaagctc 420

tgtgtgagtc tggtggtgct gtcctgggtg ctgactacct tccatgccat gctgcacacc 480

ctgctcatgg ccagattgtc attctgtgag gacagtgtga tccctcacta tttctgtgat 540

atgtctactc tgctgaaagt ggcttgttct gacacccatg ataatgaatt agcaatattt 600

atcttagggg gccctatagt tgtactacct ttccttctca tcattgtttc ttatgcaaga 660

attgtttcct ccatcttcaa ggtcccttct tctcaaagca tccataaagc cttctccacc 720

tgtggctccc acctgtctgt ggtgtcactg ttctatggga cagtcattgg tctctactta 780

tgtccttcag ctaataactc cactgtgaag gagactgtca tgtctttgat gtacacaatg 840

gtgacaccca tgctgaaccc cttcatctac agcctaagaa acagagacat aaaagatgca 900

ttagaaaaaa taatgtgcaa aaagcaaatt ccctcctttc tatga 945

<210> 11
<211> 645
<212> DNA

<213> Homo Sapiens H5

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 11
atctgttttg tgtctaccac tgtcccaaag cagctggtga acatccagac acagagcaga 60

gtcatcacct atgcagactg catcacccag atgtgctttt ttatactctt tgtagtgttg 120

gacagcttac tcctgactgt gatggcctat gaccggtttg tggccatctg tcacccccctg 180

cactacacag tcattatgag ctcctggctc tgtggactgc tggttctggt gtcctggatc 240

gtgagcatcc tatattctct gttacaaagc ataatggcat tgcagctgtc cttctgtaca 300

gaactgaaaa tccctcaatt tttctgtgaa cttaatcagg tcatccacct tgcctgttcc 360

gacactttta ttaatgacat gatgatgaat tttacaagtg tgctgctggg tgggggatgc 420

ctcgctggaa tattttactn ntactttaag atactttgtt gcatatgttc gatctcatca 480

gctcagggga tgaataaagc actttccacc tgtgcatctc acctctcagt tgtctcctta 540

ttttattgta caggcgtagg tgtgtacctt agttctgctg caacccataa ctcactctca 600

aatgctgcag cctcggtgat gtacactgtg gtcacctcca tgctg 645

<210> 12
<211> 215
<212> PRT
<213> Homo Sapiens H5

<220>
<221> UNSURE
<222> (147)..(147)
<223> x = unknown

<400> 12

Ile Cys Phe Val Ser Thr Thr Val Pro Lys Gln Leu Val Asn Ile Gln
1 5 10 15

Thr Gln Ser Arg Val Ile Thr Tyr Ala Asp Cys Ile Thr Gln Met Cys
20 25 30

Phe Phe Ile Leu Phe Val Val Leu Asp Ser Leu Leu Leu Thr Val Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu His Tyr Thr Val
50 55 60

Ile Met Ser Ser Trp Leu Cys Gly Leu Leu Val Leu Val Ser Trp Ile
65 70 75 80

Val Ser Ile Leu Tyr Ser Leu Leu Gln Ser Ile Met Ala Leu Gln Leu
85 90 95

Ser Phe Cys Thr Glu Leu Lys Ile Pro Gln Phe Phe Cys Glu Leu Asn
100 105 110

Gln Val Ile His Leu Ala Cys Ser Asp Thr Phe Ile Asn Asp Met Met
115 120 125

Met Asn Phe Thr Ser Val Leu Leu Gly Gly Gly Cys Leu Ala Gly Ile
130 135 140

Phe Tyr Xaa Tyr Phe Lys Ile Leu Cys Cys Ile Cys Ser Ile Ser Ser
145 150 155 160

Ala Gln Gly Met Asn Lys Ala Leu Ser Thr Cys Ala Ser His Leu Ser
165 170 175

Val Val Ser Leu Phe Tyr Cys Thr Gly Val Gly Val Tyr Leu Ser Ser
180 185 190

Ala Ala Thr His Asn Ser Leu Ser Asn Ala Ala Ala Ser Val Met Tyr
195 200 205

Thr Val Val Thr Ser Met Leu
210 215

<210> 13
<211> 640
<212> DNA
<213> Rattus sp. J1

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 13
catctgcttt acttctgcta gcatcccaaa gatgctagtg aatatacaga cgaagaacaa 60

ggtgatcacc tatgaaggct gcatctccca agtatacttt tcatactctt tggagttttg 120

gacaactttc ttctcgactg tgatggccta tgaccgatat gtggccatct gtcacccatc 180

tnactacaca ggtcatcatg aaccnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 420

nnnnnnnntt tattcttact ctaagatagt ttcctccata cgagaaatct catcatcaca 480

gggaaagtac aagnnattct ccacctgtgc atcccacctc tcagttgttt cattattcta 540

ttctacactt ttgggtgtgt accttagttc ttcttttacc caaaactcac actcaactgc 600

acgggcatct gttatgtaca gtgtggtcac ccccatgttg 640

<210> 14
<211> 213
<212> PRT
<213> Rattus sp. J1

<220>
<221> UNSURE
<222> (61)..(165)
<223> x = unknown

<400> 14

Ile Cys Phe Thr Ser Ala Ser Ile Pro Lys Met Leu Val Asn Ile Gln
1 5 10 15

Thr Lys Asn Lys Val Ile Thr Tyr Glu Gly Cys Ile Ser Gln Val Tyr
20 25 30

Phe Ser Tyr Ser Leu Glu Phe Trp Thr Thr Phe Phe Ser Thr Val Met
35 40 45

Ala Tyr Asp Arg Tyr Val Ala Ile Cys His Pro Ser Xaa Tyr Thr Gly
50 55 60

His His Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr
130 135 140

Ser Tyr Ser Lys Ile Val Ser Ser Ile Arg Glu Ile Ser Ser Ser Gln
145 150 155 160

Gly Lys Tyr Lys Xaa Phe Ser Thr Cys Ala Ser His Leu Ser Val Val
165 170 175

Ser Leu Phe Tyr Ser Thr Leu Leu Gly Val Tyr Leu Ser Ser Ser Phe
180 185 190

Thr Gln Asn Ser His Ser Thr Ala Arg Ala Ser Val Met Tyr Ser Val
195 200 205

Val Thr Pro Met Leu
210

<210> 15
<211> 636
<212> DNA
<213> Rattus sp. J2

<400> 15
acctccacca ccatcccaaa gatgctggta aatatacaca cccagagcaa tactatcacc 60

tatgaagact gtatttccca gatgtttgta ctcttggttt ttggagaact ggacaacttt 120

ctcctggctg tgatggccta tgatcgatat gtggctatct gtcacccact gtattacaca 180

gtcattgtga accaccgact ctgtatcctg ctgcttctgc tgtcctgggt tgtcagcatt 240

ttacatgcct tcttacagag cttaattgta ctacagttga ccttctgtgg agatgtgaaa 300

atcctcact tcttctgtga gctcaatcag ctgtcccaac tcacatgttc agacaacttt 360

ccaagtcacc tcacaatgca tcttgtacct gttatatttg cagctatttc cctcagtggt 420

atcctttact cttatttcaa gatagtgtct tccatacgtt ctatgtcctc agttcaaggg 480

aagtacaagg cattttctac atgtgcctct caccttcca ttgtctcctt attttatagt 540

acaggcctcg gggtgtacgt cagttctgct gtgatccgaa gctcacactc ctctgcaagt 600

gcttcggtca tgtatactgt ggtcaccccc atgttg 636

<210> 16
<211> 212
<212> PRT
<213> Rattus sp. J2

<400> 16

Thr Ser Thr Thr Ile Pro Lys Met Leu Val Asn Ile His Thr Gln Ser
1 5 10 15

Asn Thr Ile Thr Tyr Glu Asp Cys Ile Ser Gln Met Phe Val Leu Leu
20 25 30

Val Phe Gly Glu Leu Asp Asn Phe Leu Leu Ala Val Met Ala Tyr Asp
35 40 45

Arg Tyr Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Val Ile Val Asn
50 55 60

His Arg Leu Cys Ile Leu Leu Leu Leu Leu Ser Trp Val Val Ser Ile
65 70 75 80

Leu His Ala Phe Leu Gln Ser Leu Ile Val Leu Gln Leu Thr Phe Cys
85 90 95

Gly Asp Val Lys Ile Pro His Phe Phe Cys Glu Leu Asn Gln Leu Ser
100 105 110

Gln Leu Thr Cys Ser Asp Asn Phe Pro Ser His Leu Thr Met His Leu
115 120 125

Val Pro Val Ile Phe Ala Ala Ile Ser Leu Ser Gly Ile Leu Tyr Ser
130 135 140

Tyr Phe Lys Ile Val Ser Ser Ile Arg Ser Met Ser Ser Val Gln Gly
145 150 155 160

Lys Tyr Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ser Ile Val Ser
165 170 175

Leu Phe Tyr Ser Thr Gly Leu Gly Val Tyr Val Ser Ser Ala Val Ile
180 185 190

Arg Ser Ser His Ser Ser Ala Ser Ala Ser Val Met Tyr Thr Val Val
195 200 205

Thr Pro Met Leu
210

<210> 17
<211> 646
<212> DNA
<213> Rattus sp. J4

<400> 17
cataggctat tcatcttctg tcacacccaa tatgcttgtc aacttcctta taaagcaaaa 60

taccatctca taccttggat gttctataca gtttggctca gctgctttgt ttggaggtct 120

tgaatgcttc cttctggctg ccatggcgta tgatcgtttt gtagcaatct gcaacccact 180

gctttattca acgaaaatgt ccacacaagt ctgtgtccag ttggttgtgg gatcttatat 240

agggggattt cttaatgcct cctcttttac cctttccttt ttttccttgt ccttctgtgg 300

accaaataga atcaatcact tttactgtga ttttgctccg ttagtagaac tttcttgctc 360

tgatgtcagt gttcctgatg ctgttacctc attttctgct gcctcagtta ctatgctcac 420

agtgtttatc atagccatct cctataccta tatcctcatc accatcctga agatgcgttc 480

cactgagggt cgacagaaag cattctctac ctgcacttcc cacctcactg cagtcactct 540

gtgctatgga accatcacat tcatctatgt gatgcccaag tccagctact ccacagacca 600

gaacaaggtg gtgtctgtgt tttatatggt ggtgatcccc atgttg 646

<210> 18
<211> 215
<212> PRT
<213> Rattus sp. J4

<400> 18

Ile Gly Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn Phe Leu
1 5 10 15

Ile Lys Gln Asn Thr Ile Ser Tyr Leu Gly Cys Ser Ile Gln Phe Gly

```
            20                  25                  30

Ser Ala Ala Leu Phe Gly Gly Leu Glu Cys Phe Leu Leu Ala Ala Met
        35                  40                  45

Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn Pro Leu Leu Tyr Ser Thr
    50                  55                  60

Lys Met Ser Thr Gln Val Cys Val Gln Leu Val Val Gly Ser Tyr Ile
65                  70                  75                  80

Gly Gly Phe Leu Asn Ala Ser Ser Phe Thr Leu Ser Phe Phe Ser Leu
                85                  90                  95

Ser Phe Cys Gly Pro Asn Arg Ile Asn His Phe Tyr Cys Asp Phe Ala
            100                 105                 110

Pro Leu Val Glu Leu Ser Cys Ser Asp Val Ser Val Pro Asp Ala Val
        115                 120                 125

Thr Ser Phe Ser Ala Ala Ser Val Thr Met Leu Thr Val Phe Ile Ile
    130                 135                 140

Ala Ile Ser Tyr Thr Tyr Ile Leu Ile Thr Ile Leu Lys Met Arg Ser
145                 150                 155                 160

Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Thr Ser His Leu Thr
                165                 170                 175

Ala Val Thr Leu Cys Tyr Gly Thr Ile Thr Phe Ile Tyr Val Met Pro
            180                 185                 190

Lys Ser Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val Phe Tyr
        195                 200                 205

Met Val Val Ile Pro Met Leu
    210                 215
```

<210> 19
<211> 481
<212> DNA
<213> Rattus sp. J7

<400> 19

```
catctgcaag cccctgcact acaccaccat catgaataac cgagtgtgca cagttctagt     60

cctctcctgt tggtttgctg gcctgttgat catcctccca cctcttggtc atggcctcca    120

gctggagttc tgtgactcca atgtgattga tcattttggc tgtgatgcct ctccaattct    180

gcagataacc tgctcagaca cggtatttat agagaaaatt gtcttggctt ttgccatact    240

gacactcatc attactctgg tatgtgttgt tctctcctac acatacatca tcaagaccat    300

tttaaagttt ccttctgctc aacaaagaaa aaaggccttt tctacatgtt cttcccacat    360

gattgtggtt tccatcacct atgggagctg tattttcatc tacatcaaac cttcagcgaa    420

ggaaggggta gccatcaata aggttgtatc tgtgctcaca acatcagtcg ccccttgct     480
```

<210> 20
<211> 160
<212> PRT
<213> Rattus sp. J7

<400> 20

Ile Cys Lys Pro Leu His Tyr Thr Thr Ile Met Asn Asn Arg Val Cys
1 5 10 15

Thr Val Leu Val Leu Ser Cys Trp Phe Ala Gly Leu Leu Ile Ile Leu
20 25 30

Pro Pro Leu Gly His Gly Leu Gln Leu Glu Phe Cys Asp Ser Asn Val
35 40 45

Ile Asp His Phe Gly Cys Asp Ala Ser Pro Ile Leu Gln Ile Thr Cys
50 55 60

Ser Asp Thr Val Phe Ile Glu Lys Ile Val Leu Ala Phe Ala Ile Leu
65 70 75 80

Thr Leu Ile Ile Thr Leu Val Cys Val Val Leu Ser Tyr Thr Tyr Ile
85 90 95

Ile Lys Thr Ile Leu Lys Phe Pro Ser Ala Gln Gln Arg Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ser Ser His Met Ile Val Val Ser Ile Thr Tyr Gly
115 120 125

Ser Cys Ile Phe Ile Tyr Ile Lys Pro Ser Ala Lys Glu Gly Val Ala
130 135 140

Ile Asn Lys Val Val Ser Val Leu Thr Thr Ser Val Ala Pro Leu Leu
145 150 155 160

<210> 21
<211> 481
<212> DNA
<213> Rattus sp. J8

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 21
catctgccac ccgctccact actctcttct catgagtcct gacaactgtg ctgctctggt 60

aacagtctcc tgggtgacag gggtgggcac gggcttcctg ccttccctcc tgatttctaa 120

gttggacttc tgtgggccca accgcatcaa ccatttcttc tgtgacctcc ctccattaat 180

ccagctgtcc tgctccagcg tctttgtgac agaaatggcc atctttgtcc tgtccatcgc 240

tgtgctctgc atctgtttcc tcctaacccn nnnntcctac attttcatag tgtcctccat 300

tctgagaatc ccttccacta ccggcaggat gaagacattt tctacatgtg gctcccacct 360

ggccgtggtc accatctact atgggaccat gatctccatg tatgtcggcc caaatgcgca 420

tctgtccccg gagctcaaca aggtcatttc tgtcttctac actgtgatca ccccactact 480

g 481

<210> 22
<211> 160
<212> PRT
<213> Rattus sp. J8

<220>
<221> UNSURE
<222> (90)..(91)
<223> x = unknown

<400> 22

Ile Cys His Pro Leu His Tyr Ser Leu Leu Met Ser Pro Asp Asn Cys
1 5 10 15

Ala Ala Leu Val Thr Val Ser Trp Val Thr Gly Val Gly Thr Gly Phe
20 25 30

Leu Pro Ser Leu Leu Ile Ser Lys Leu Asp Phe Cys Gly Pro Asn Arg
35 40 45

Ile Asn His Phe Phe Cys Asp Leu Pro Pro Leu Ile Gln Leu Ser Cys
50 55 60

Ser Ser Val Phe Val Thr Glu Met Ala Ile Phe Val Leu Ser Ile Ala
65 70 75 80

Val Leu Cys Ile Cys Phe Leu Leu Thr Xaa Xaa Ser Tyr Ile Phe Ile
85 90 95

Val Ser Ser Ile Leu Arg Ile Pro Ser Thr Thr Gly Arg Met Lys Thr
100 105 110

Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Thr Ile Tyr Tyr Gly
115 120 125

Thr Met Ile Ser Met Tyr Val Gly Pro Asn Ala His Leu Ser Pro Glu
130 135 140

Leu Asn Lys Val Ile Ser Val Phe Tyr Thr Val Ile Thr Pro Leu Leu
145 150 155 160

<210> 23
<211> 646
<212> DNA

<213> Rattus sp. J11

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 23
ngtctgcttc tcctccacca ctgtccccaa ggtactggct aaccacatac tcagtagtca 60

ggccatttcc ttctctgggt gtctaactca gctgtatttt ctctgtgtgt ctgtgaatat 120

ggacaatttc ctgctggctg tgatggccta tgacagattt gtggccatat gccacccttt 180

gtactacaca acaaagatga cccaccagct ctgtgtcttg ctggtgtctg gatcannnnn 240

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nntgtgatca tggtcacccc 420

atttgtctgc atcctcatct cttacatcta catcaccaat gcagtcctca gagtctcatc 480

ctttagggga ggatggaaag ccttctccac ctgtggctca cacctggctg tggtctgcct 540

cttctatggc accatcattg ctgtgtattt caatcctgta tcttcccatt catctgagaa 600

ggacactgca gcaactgtgc tatacacagt ggtgactccc atgttg 646

<210> 24
<211> 215
<212> PRT
<213> Rattus sp. J11

<220>
<221> UNSURE
<222> (79)..(134)
<223> x = unknown

<400> 24

Val Cys Phe Ser Ser Thr Thr Val Pro Lys Val Leu Ala Asn His Ile
1 5 10 15

Leu Ser Ser Gln Ala Ile Ser Phe Ser Gly Cys Leu Thr Gln Leu Tyr
20 25 30

Phe Leu Cys Val Ser Val Asn Met Asp Asn Phe Leu Leu Ala Val Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Thr
50 55 60

Lys Met Thr His Gln Leu Cys Val Leu Leu Val Ser Gly Ser Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Val Ile Met Val Thr Pro Phe Val Cys Ile
130 135 140

Leu Ile Ser Tyr Ile Tyr Ile Thr Asn Ala Val Leu Arg Val Ser Ser
145 150 155 160

Phe Arg Gly Gly Trp Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala
165 170 175

Val Val Cys Leu Phe Tyr Gly Thr Ile Ile Ala Val Tyr Phe Asn Pro
180 185 190

Val Ser Ser His Ser Ser Glu Lys Asp Thr Ala Ala Thr Val Leu Tyr
195 200 205

Thr Val Val Thr Pro Met Leu
210 215

<210> 25
<211> 646
<212> DNA
<213> Rattus sp. J14

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 25
tgtctgcttc tcctccacca ctgtccccaa ggtactggct aaccacatac tcagtagtca 60

ggccatttcc ttctctgggt gtctaactca gctgtatttt ctctgtgtgt ctgtgaatat 120

ggacaatttc ctgctggctg tgatggccta tgacagattt gtggccatat gccacccttt 180

gtactacaca acaccgatga cccaccagct ctgtgtcttg ctggtgtctg gatcannnnn 240

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nntgtgatca tggtcacccc 420

atttgtctgc atcctcatct cttacatcta catcaccaat gcagtcctca gagtctcatc 480

ctttagggga ggatggaaag ccttctccac ctgtggctca cacctggctg tggtctgcct 540

cttctatggc accatcattg ctgtgtattt caatcctgta tcttcccatt catctgagaa 600

ggacactgca gcaactgtgc tatacacagt ggtgactccc atgttg 646

<210> 26
<211> 215
<212> PRT
<213> Rattus sp. J14

<220>
<221> UNSURE
<222> (79)..(134)
<223> x = unknown

<400> 26

Val Cys Phe Ser Ser Thr Thr Val Pro Lys Val Leu Ala Asn His Ile
1 5 10 15

Leu Ser Ser Gln Ala Ile Ser Phe Ser Gly Cys Leu Thr Gln Leu Tyr
20 25 30

Phe Leu Cys Val Ser Val Asn Met Asp Asn Phe Leu Leu Ala Val Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Thr
50 55 60

Pro Met Thr His Gln Leu Cys Val Leu Leu Val Ser Gly Ser Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
85 90 95

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
100 105 110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Val Ile Met Val Thr Pro Phe Val Cys Ile
130 135 140

Leu Ile Ser Tyr Ile Tyr Ile Thr Asn Ala Val Leu Arg Val Ser Ser
145 150 155 160

Phe Arg Gly Gly Trp Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala
165 170 175

Val Val Cys Leu Phe Tyr Gly Thr Ile Ile Ala Val Tyr Phe Asn Pro
180 185 190

Val Ser Ser His Ser Ser Glu Lys Asp Thr Ala Ala Thr Val Leu Tyr
195 200 205

Thr Val Val Thr Pro Met Leu
210 215

<210> 27
<211> 481
<212> DNA
<213> Rattus sp. J15

<220>
<221> misc_feature
<222> ()..()
<223> x = unknown

<400> 27
tatctgcaac cctctgcgct acccagtgct catgagcggc cgggtgtgcc tgctcatggt 60

cgtggcctcc tggttgggag gatccctcaa cgcctccatt cagacttctc tgacccttca 120

gttcccctac tgtggatcac ggaagatctc ccacttcttc tgtgaggtgc cctcgctgct 180

gannntggcc tgtgcagaca ctgaagccta tgagcaggta ctatttgtga caggcgtggt 240

ggtcctcctg gtgcccatta cattcattac tgcctcttat gccctcatcc tggctgctgt 300

gctccgaatg cactctgcgg aggggagtca gaaggcccta gccacatgct cctctcacct 360

gacagtcgtc aatctcttct atgggcccct tgtctacacc tacatgttac ctgcttccta 420

tcactcacca ggccaagacg acatagtatc cgtcttttac accgttctca cacccatgct 480

t 481

<210> 28
<211> 160
<212> PRT
<213> Rattus sp. J15

<220>
<221> UNSURE
<222> (61)..(62)
<223> x = unknown

<400> 28

Ile Cys Asn Pro Leu Arg Tyr Pro Val Leu Met Ser Gly Arg Val Cys
1 5 10 15

Leu Leu Met Val Val Ala Ser Trp Leu Gly Gly Ser Leu Asn Ala Ser
20 25 30

Ile Gln Thr Ser Leu Thr Leu Gln Phe Pro Tyr Cys Gly Ser Arg Lys
35 40 45

Ile Ser His Phe Phe Cys Glu Val Pro Ser Leu Leu Xaa Xaa Ala Cys
50 55 60

Ala Asp Thr Glu Ala Tyr Glu Gln Val Leu Phe Val Thr Gly Val Val
65 70 75 80

Val Leu Leu Val Pro Ile Thr Phe Ile Thr Ala Ser Tyr Ala Leu Ile
85 90 95

Leu Ala Ala Val Leu Arg Met His Ser Ala Glu Gly Ser Gln Lys Ala
100 105 110

Leu Ala Thr Cys Ser Ser His Leu Thr Val Val Asn Leu Phe Tyr Gly
115 120 125

Pro Leu Val Tyr Thr Tyr Met Leu Pro Ala Ser Tyr His Ser Pro Gly
130 135 140

Gln Asp Asp Ile Val Ser Val Phe Tyr Thr Val Leu Thr Pro Met Leu
145 150 155 160

<210> 29
<211> 481
<212> DNA
<213> Rattus sp. J16

<400> 29
catctgtagg cctcttcact atcctaccct catgacccag acactgtgtg ccaagattgc 60

cactggttgc tggttgggag gcttggctgg gccagtggta gaaatttcct tggtgtctcg 120

tctccttttt tgtggcccca atcacattca acacatcttt tgtgatttcc cacctgtgct 180

gagcttggct tgtactgata catcagtgaa tgtcctggta gattttatta taaacctctg 240

caagatcctg gccaccttcc tgctgatcct gagctcctac ttgcagataa tccgcacagt 300

gctcaagatt ccttcagctg caggcaagaa gaaagcattc tcgacttgtg cctcccatct 360

cactgtggtt ctcatcttct atgggagcat ccttttcatg tatgtgcggc tgaagaagac 420

ttactccctt gactacgaca gagccttggc agtagtctac tccgtggtta ccccctttcct 480

g 481

<210> 30
<211> 160
<212> PRT
<213> Rattus sp. J16

<400> 30

Ile Cys Arg Pro Leu His Tyr Pro Thr Leu Met Thr Gln Thr Leu Cys
1 5 10 15

Ala Lys Ile Ala Thr Gly Cys Trp Leu Gly Gly Leu Ala Gly Pro Val
20 25 30

Val Glu Ile Ser Leu Val Ser Arg Leu Leu Phe Cys Gly Pro Asn His
35 40 45

Ile Gln His Ile Phe Cys Asp Phe Pro Pro Val Leu Ser Leu Ala Cys
50 55 60

Thr Asp Thr Ser Val Asn Val Leu Val Asp Phe Ile Ile Asn Leu Cys
65 70 75 80

Lys Ile Leu Ala Thr Phe Leu Leu Ile Leu Ser Ser Tyr Leu Gln Ile
85 90 95

Ile Arg Thr Val Leu Lys Ile Pro Ser Ala Ala Gly Lys Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Leu Ile Phe Tyr Gly
115 120 125

Ser Ile Leu Phe Met Tyr Val Arg Leu Lys Lys Thr Tyr Ser Leu Asp
130 135 140

Tyr Asp Arg Ala Leu Ala Val Val Tyr Ser Val Val Thr Pro Phe Leu
145 150 155 160

<210> 31
<211> 481
<212> DNA
<213> Rattus sp. J17

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 31
aatctgcaac ccactgcttt attccaccaa aatgtccaca caagtctgta tccagttggt 60

tgcaggatct tatatagggg gttttcttaa tacttgcctc atcatgtttt acttttttctc 120

ttttctcttc tgtgggccaa atatagttga tcatttttttc tgtgattttg ctcctttnnt 180

ggaactttcg tgctctgatg tgagtgtctc tgtagttgtt atgtcatttt ctgctggctc 240

agttactatg atcacagtgt ttatcatagc catctcctat tcttacatcc tcatcaccat 300

cctgaagatg tcctcaactg agggccgtca caaggctttc tccacatgta cctcccacct 360

cactgcagtc actctctact atggcaccat taccttcatt tatgtgatgc ccaagtccac 420

atactctaca gaccagaaca aggtggtgtc tgtgttttac atggtggtga tcccaatgtt 480

g 481

<210> 32
<211> 160
<212> PRT
<213> Rattus sp. J17

<220>
<221> UNSURE
<222> (59)..(60)
<223> x = unknown

<400> 32

Ile Cys Asn Pro Leu Leu Tyr Ser Thr Lys Met Ser Thr Gln Val Cys
1 5 10 15

Ile Gln Leu Val Ala Gly Ser Tyr Ile Gly Gly Phe Leu Asn Thr Cys
20 25 30

Leu Ile Met Phe Tyr Phe Phe Ser Phe Leu Phe Cys Gly Pro Asn Ile
35 40 45

Val Asp His Phe Phe Cys Asp Phe Ala Pro Xaa Xaa Glu Leu Ser Cys
50 55 60

Ser Asp Val Ser Val Ser Val Val Val Met Ser Phe Ser Ala Gly Ser
65 70 75 80

Val Thr Met Ile Thr Val Phe Ile Ile Ala Ile Ser Tyr Ser Tyr Ile
85 90 95

Leu Ile Thr Ile Leu Lys Met Ser Ser Thr Glu Gly Arg His Lys Ala
100 105 110

Phe Ser Thr Cys Thr Ser His Leu Thr Ala Val Thr Leu Tyr Tyr Gly
115 120 125

Thr Ile Thr Phe Ile Tyr Val Met Pro Lys Ser Thr Tyr Ser Thr Asp
130 135 140

Gln Asn Lys Val Val Ser Val Phe Tyr Met Val Val Ile Pro Met Leu
145 150 155 160

<210> 33
<211> 479
<212> DNA
<213> Rattus sp. J19

<400> 33
tatctgccac cctctgaagt acacagttat catgaatcac tatttttgtg tgatgctgct 60

gctcttctct gtgttcgtta gcattgcaca tgcgttgttc cacattttaa tggtgttgat 120

actgactttc agcacaaaaa ctgaaatccc tcacttttttc tgtgagctgg ctcatatcat 180

caaacttacc tgttccgata attttatcaa ctatctgctg atatacacag agtctgtctt 240

atttttttggt gttcatattg tagggatcat tttgtcttat atttacactg tatcctcagt 300

tttaagaatg tcattattgg gaggaatgta taaagccttt tcaacatgtg gatctcattt 360

gtcggttgtc tctgttttat ggcacaggtt ttggggtaca cataagctct ccacttactg 420

actctccaag gaagactgta gtggcttcag tgatgtacac tgtggttact cagatgctg 479

<210> 34
<211> 139
<212> PRT

<213> Rattus sp. J19

<400> 34

```
Ile Cys His Pro Leu Lys Tyr Thr Val Ile Met Asn His Tyr Phe Cys
1               5                  10                  15

Val Met Leu Leu Leu Phe Ser Val Phe Val Ser Ile Ala His Ala Leu
            20                  25                  30

Phe His Ile Leu Met Val Leu Ile Leu Thr Phe Ser Thr Lys Thr Glu
        35                  40                  45

Ile Pro His Phe Phe Cys Glu Leu Ala His Ile Ile Lys Leu Thr Cys
    50                  55                  60

Ser Asp Asn Phe Ile Asn Tyr Leu Leu Ile Tyr Thr Glu Ser Val Leu
65                  70                  75                  80

Phe Phe Gly Val His Ile Val Gly Ile Ile Leu Ser Tyr Ile Tyr Thr
                85                  90                  95

Val Ser Ser Val Leu Arg Met Ser Leu Leu Gly Gly Met Tyr Lys Ala
            100                 105                 110

Phe Ser Thr Cys Gly Ser His Leu Ser Val Val Ser Val Leu Trp His
        115                 120                 125

Arg Phe Trp Gly Thr His Lys Leu Ser Thr Tyr
    130                 135
```

<210> 35
<211> 480
<212> DNA
<213> Rattus sp. J20

<220>
<221> misc_feature
<222> ()..()
<223> n = unknown

<400> 35

```
aatctgctac ccactgaggt accttctcat catgagctgg gtggtgtgca cagcactgtc     60

cgtggcaatc tgggtcatag gcttttgtgc ctccgttata cctctctgct tcacgatcct    120

cccactctgt ggtccttacg tcgttgatta tcttttctgc gagctgccca tccttctgca    180

cctgttctgc acagatacat ctctgctgga gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn    240

nnnnnnnnnn nncccttcct cctgattgtt ctctcctacc ttcgcatcct ggtggctgtg    300

ataagaatag actcagctga gggcagaaaa aaggcctttt caacttgtgc ttcacacttg    360

gctgtggtga ccatctacta tggaacaggg ctgatcaggt acttgaggcc caagtcccct    420

tattccgctg agggagacag actgatctct gtgttctatg cagtcattgg ccctgcactg    480
```

<210> 36
<211> 160
<212> PRT
<213> Rattus sp. J2O

<220>
<221> UNSURE
<222> (71)..(84)
<223> x = unknown

<400> 36

Ile Cys Tyr Pro Leu Arg Tyr Leu Leu Ile Met Ser Trp Val Val Cys
1 5 10 15

Thr Ala Leu Ser Val Ala Ile Trp Val Ile Gly Phe Cys Ala Ser Val
20 25 30

Ile Pro Leu Cys Phe Thr Ile Leu Pro Leu Cys Gly Pro Tyr Val Val
35 40 45

Asp Tyr Leu Phe Cys Glu Leu Pro Ile Leu Leu His Leu Phe Cys Thr
50 55 60

Asp Thr Ser Leu Leu Glu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65 70 75 80

Xaa Xaa Xaa Xaa Pro Phe Leu Leu Ile Val Leu Ser Tyr Leu Arg Ile
85 90 95

Leu Val Ala Val Ile Arg Ile Asp Ser Ala Glu Gly Arg Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ala Ser His Leu Ala Val Val Thr Ile Tyr Tyr Gly
115 120 125

Thr Gly Leu Ile Arg Tyr Leu Arg Pro Lys Ser Leu Tyr Ser Ala Glu
130 135 140

Gly Asp Arg Leu Ile Ser Val Phe Tyr Ala Val Ile Gly Pro Ala Leu
145 150 155 160

<210> 37
<211> 35
<212> DNA
<213> artificial - primer A1

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> misc_feature
<222> (3)..(3)
<223> t or c

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> misc_feature
<222> (5)..(5)
<223> g or a

<220>
<221> misc_feature
<222> (6)..(6)
<223> g or c

<220>
<221> misc_feature
<222> (10)..(10)
<223> a or c

<220>
<221> misc_feature
<222> (13)..(13)
<223> g or c

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (18)..(18)
<223> t or c

<220>
<221> misc_feature
<222> (19)..(19)
<223> c or t

<220>
<221> modified_base
<222> (24)..(24)

<223> i

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> modified_base
<222> (30)..(30)
<223> i

<220>
<221> modified_base
<222> (33)..(33)
<223> i

<400> 37
aantnnatnn tnntnaannt ngcngtngcn gcnga 35

<210> 38
<211> 32
<212> DNA
<213> artificial - primer A2

<220>
<221> misc_feature
<222> (3)..(3)
<223> n = c or t

<220>
<221> misc_feature
<222> (6)..(6)
<223> n = c or t

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = c or t

<220>
<221> misc_feature
<222> (10)..(10)
<223> n = c or a

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> misc_feature
<222> (13)..(13)
<223> n = g or a

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = t or c

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> misc_feature
<222> (25)..(25)
<223> n = c or t

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> modified_base
<222> (30)..(30)
<223> i

<400> 38
aantanttnn tnntnaanct ngcnntngcn ga 32

<210> 39
<211> 32
<212> DNA
<213> artificial - primer A3

<220>

<221> misc_feature
<222> (3)..(4)
<223> n = c or t

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = a or t

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = c or t

<220>
<221> misc_feature
<222> (10)..(10)
<223> n = c or a

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (16)..(16)
<223> n = a or t

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> misc_feature
<222> (26)..(26)
<223> n = c or g

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> modified_base
<222> (30)..(30)
<223> i

<400> 39
aannnnttnn tnatnncnct ngcntnngcn ga 32

<210> 40
<211> 32
<212> DNA
<213> artificial - primer A4

<220>
<221> misc_feature
<222> (1)..(1)
<223> n = c or a

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (7)..(7)
<223> n = t or c

<220>
<221> modified_base

<222> (9)..(9)
<223> i

<220>
<221> misc_feature
<222> (15)..(15)
<223> n = c or t

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = c or t

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (22)..(22)
<223> n = a or t

<220>
<221> misc_feature
<222> (23)..(23)
<223> n = c or g

<220>
<221> misc_feature
<222> (24)..(24)
<223> n = c or t

<220>
<221> misc_feature
<222> (27)..(27)
<223> n = c or t

<220>
<221> modified_base
<222> (30)..(30)
<223> i

<400> 40
ngnttnntna tgtgnaanct nnnnttngcn ga 32

<210> 41
<211> 32
<212> DNA

<213> artificial - primer A5

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = t or c

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (18)..(19)
<223> n = t or c

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (22)..(22)
<223> n = a or t

<220>
<221> misc_feature
<222> (23)..(23)
<223> n = c or g

<220>
<221> modified_base
<222> (24)..(24)

<223> i

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> modified_base
<222> (30)..(30)
<223> i

<400> 41
acngtntana tnacncannt nnnnatngcn ga 32

<210> 42
<211> 33
<212> DNA
<213> artificial - primer B1

<220>
<221> modified_base
<222> (4)..(4)
<223> i

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = c or t

<220>
<221> misc_feature
<222> (6)..(6)
<223> n = g or t

<220>
<221> misc_feature
<222> (7)..(7)
<223> n = g or a

<220>
<221> modified_base
<222> (13)..(13)
<223> i

<220>
<221> misc_feature
<222> (15)..(15)
<223> n = a or t

<220>
<221> modified_base
<222> (16)..(16)
<223> i

<220>
<221> misc_feature
<222> (17)..(18)
<223> n = a or c

<220>
<221> misc_feature
<222> (19)..(19)
<223> n = a or g

<220>
<221> modified_base
<222> (22)..(22)
<223> i

<220>
<221> misc_feature
<222> (24)..(24)
<223> n = t or c

<220>
<221> modified_base
<222> (25)..(25)
<223> i

<220>
<221> misc_feature
<222> (27)..(27)
<223> n = t or c

<220>
<221> modified_base
<222> (28)..(28)
<223> i

<220>
<221> misc_feature
<222> (31)..(31)
<223> n = g or a

<400> 42
ctgnnnnttc atnannnnnt anannanngg ntt 33

<210> 43
<211> 31
<212> DNA
<213> artificial - primer B2

<220>
<221> misc_feature
<222> (1)..(1)
<223> n = g or t

<220>
<221> misc_feature
<222> (2)..(2)
<223> n = g or a

<220>
<221> misc_feature
<222> (4)..(4)
<223> n = g or c

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = g or a

<220>
<221> modified_base
<222> (8)..(8)
<223> i

<220>
<221> misc_feature
<222> (11)..(11)
<223> n = g or a

<220>
<221> misc_feature
<222> (14)..(14)
<223> n = g or a

<220>
<221> misc_feature
<222> (17)..(17)
<223> n = g or a

<220>
<221> modified_base
<222> (20)..(20)
<223> i

<220>
<221> modified_base
<222> (23)..(23)
<223> i

<220>
<221> modified_base
<222> (26)..(26)
<223> i

<220>
<221> misc_feature
<222> (29)..(29)
<223> n = g or a

<400> 43
nntnnttnag ncancantan atnatnggnt t 31

<210> 44
<211> 32
<212> DNA
<213> artificial - primer B3

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> misc_feature
<222> (6)..(6)
<223> n = g or a

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = g or a

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature

<222> (18)..(18)
<223> n = g or a

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> misc_feature
<222> (30)..(30)
<223> n = g or a

<400> 44
tcnatnttna angtngtnta natnatnggn tt 32

<210> 45
<211> 32
<212> DNA
<213> artificial - primer B4

<220>
<221> misc_feature
<222> (3)..(3)
<223> n = c or t

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = g or a

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = g or a

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (24)..(24)
<223> n = g or a

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> misc_feature
<222> (30)..(30)
<223> n = g or a

<400> 45
gcnttngtna anatngcnta nagnaanggn tt 32

<210> 46
<211> 32
<212> DNA
<213> artificial - primer B5

<220>
<221> misc_feature
<222> (3)..(3)
<223> n = a or g

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (9)..(9)
<223> n = a or g

<220>
<221> misc_feature
<222> (10)..(10)
<223> n = c or g

<220>
<221> misc_feature
<222> (11)..(11)
<223> n = a or t

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (16)..(16)
<223> n = g or c

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = g or a

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (24)..(24)
<223> n = g or c

<220>
<221> modified_base
<222> (26)..(27)
<223> i

<220>
<221> misc_feature
<222> (30)..(30)
<223> n = a or g

<400> 46
aantcnggnn nncgnnanta natnannggn tt 32

<210> 47
<211> 32
<212> DNA
<213> artificial - primer B6

<220>
<221> misc_feature
<222> (1)..(1)
<223> n = g or c

<220>
<221> misc_feature
<222> (2)..(2)
<223> n = a or t

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> misc_feature
<222> (4)..(4)
<223> n = g or c

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = a or t

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>

<221> misc_feature
<222> (12)..(12)
<223> n = a or g

<220>
<221> misc_feature
<222> (15)..(15)
<223> n = a or g

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = a or g

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<220>
<221> misc_feature
<222> (24)..(24)
<223> n = a or g

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> misc_feature
<222> (30)..(30)
<223> n = g or a

<400> 47
nnnnnnccna cnaanaanta natnaanggn tt 32

<210> 48
<211> 23
<212> DNA
<213> artificial - primer P1

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (9)..(9)

<223> n = t or c

<220>
<221> misc_feature
<222> (12)..(12)
<223> n = t or c

<220>
<221> misc_feature
<222> (13)..(13)
<223> n = a or c

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (18)..(18)
<223> n = t or c

<220>
<221> modified_base
<222> (21)..(21)
<223> i

<400> 48
atggcntang anngntangt ngc 23

<210> 49
<211> 29
<212> DNA
<213> artificial - primer P4

<220>
<221> modified_base
<222> (3)..(3)
<223> i

<220>
<221> misc_feature
<222> (5)..(5)
<223> n = g or a

<220>
<221> modified_base
<222> (6)..(6)
<223> i

<220>
<221> misc_feature
<222> (7)..(7)
<223> n = g or c

<220>
<221> misc_feature
<222> (8)..(8)
<223> n = a or t

<220>
<221> modified_base
<222> (9)..(9)
<223> i

<220>
<221> modified_base
<222> (12)..(12)
<223> i

<220>
<221> misc_feature
<222> (14)..(14)
<223> n = t or c

<220>
<221> modified_base
<222> (15)..(15)
<223> i

<220>
<221> misc_feature
<222> (16)..(16)
<223> n = g or c

<220>
<221> misc_feature
<222> (17)..(17)
<223> n = a or t

<220>
<221> modified_base
<222> (18)..(18)
<223> i

<220>
<221> misc_feature
<222> (20)..(20)
<223> n = g or a

<220>
<221> misc_feature
<222> (21)..(21)
<223> n = g or a

<220>
<221> modified_base
<222> (24)..(24)
<223> i

<220>
<221> misc_feature
<222> (25)..(25)
<223> n = g or c

<220>
<221> misc_feature
<222> (26)..(26)
<223> n = a or t

<220>
<221> modified_base
<222> (27)..(27)
<223> i

<220>
<221> misc_feature
<222> (28)..(28)
<223> n = g or c

<400> 49
aanannnnna cnannnnnan ntgnnnnnc 29

<210> 50
<211> 6
<212> PRT
<213> artificial - motif

<400> 50

Lys Ile Val Ser Ser Ile
1 5

<210> 51
<211> 6
<212> PRT
<213> artificial - motif

<400> 51

Arg Ile Val Ser Ser Ile
1 5

<210> 52
<211> 6
<212> PRT
<213> artificial - motif

<400> 52

His Ile Thr Cys Ala Val
1 5

<210> 53
<211> 6
<212> PRT
<213> artificial - motif

<400> 53

His Ile Thr Trp Ala Val
1 5

<210> 54
<211> 19
<212> PRT
<213> Rattus sp.

<400> 54

Leu Ser Lys Glu Asp Cys Ser Gly Phe Ser Asp Val His Cys Gly Tyr
1 5 10 15

Ser Asp Ala

<210> 55
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (2)..(7)
<223> x = unknown

<400> 55

Leu Xaa Xaa Pro Met Tyr Xaa Phe Leu
1 5

<210> 56
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT

<222> (2)..(2)
<223> X = H or Q

<220>
<221> VARIANT
<222> (3)..(3)
<223> X = K or M or T

<220>
<221> VARIANT
<222> (7)..(7)
<223> X = F or L

<400> 56

Leu Xaa Xaa Pro Met Tyr Xaa Phe Leu
1 5

<210> 57
<211> 10
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (2)..(7)
<223> X = UNKNOWN

<400> 57

Met Xaa Tyr Asp Arg Xaa Xaa Ala Ile Cys
1 5 10

<210> 58
<211> 10
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (2)..(2)
<223> X = A OR S

<220>
<221> VARIANT
<222> (6)..(6)
<223> X = F OR Y

<220>
<221> VARIANT
<222> (7)..(7)
<223> X = L or V

<400> 58

Met Xaa Tyr Asp Arg Xaa Xaa Ala Ile Cys
1 5 10

<210> 59
<211> 7
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (3)..(4)
<223> X = Unknown

<400> 59

Asp Arg Xaa Xaa Ala Ile Cys
1 5

<210> 60
<211> 7
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (3)..(3)
<223> X = F or Y

<220>
<221> VARIANT
<222> (4)..(4)
<223> X = L or V

<400> 60

Asp Arg Xaa Xaa Ala Ile Cys
1 5

<210> 61
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (2)..(7)
<223> X = Unknown

<220>
<221> VARIANT
<222> (1)..(1)
<223> X = K or R

<400> 61

Xaa Xaa Phe Ser Thr Cys Xaa Ser His
1 5

<210> 62
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (1)..(1)
<223> X = K or R

<220>
<221> VARIANT
<222> (2)..(2)
<223> X = A or I or S or V

<220>
<221> VARIANT
<222> (7)..(7)
<223> X = A or G or S

<400> 62

Xaa Xaa Phe Ser Thr Cys Xaa Ser His
1 5

<210> 63
<211> 7
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (5)..(5)
<223> X = Unknown

<400> 63

Phe Ser Thr Cys Xaa Ser His
1 5

<210> 64
<211> 7
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (5)..(5)

<223> X = A or G or S

<400> 64

Phe Ser Thr Cys Xaa Ser His
1 5

<210> 65
<211> 12
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (2)..(9)
<223> X = Unknown

<400> 65

Pro Xaa Xaa Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5 10

<210> 66
<211> 12
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (2)..(2)
<223> X = M or L or V

<220>
<221> VARIANT
<222> (3)..(3)
<223> X = F or L or V

<220>
<221> VARIANT
<222> (6)..(6)
<223> X = F or I

<220>
<221> VARIANT
<222> (9)..(9)
<223> X = C or S or T

<400> 66

Pro Xaa Xaa Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5 10

<210> 67

<211> 8
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (2)..(6)
<223> X = Unknown

<400> 67

Pro Xaa Xaa Asn Pro Xaa Ile Tyr
1 5

<210> 68
<211> 8
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (2)..(2)
<223> X = M or L or V

<220>
<221> VARIANT
<222> (3)..(3)
<223> X = F or L or V

<220>
<221> VARIANT
<222> (6)..(6)
<223> X = F or I

<400> 68

Pro Xaa Xaa Asn Pro Xaa Ile Tyr
1 5

<210> 69
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> UNSURE
<222> (3)..(6)
<223> X = Unknown

<400> 69

Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5

<210> 70
<211> 9
<212> PRT
<213> Artificial - motif

<220>
<221> VARIANT
<222> (3)..(3)
<223> X = F or I

<220>
<221> VARIANT
<222> (6)..(6)
<223> X = C or S or T

<400> 70

Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5

<210> 71
<211> 333
<212> PRT
<213> Rattus sp. F3

<400> 71

Met Asp Ser Ser Asn Arg Thr Arg Val Ser Glu Phe Leu Leu Leu Gly
1 5 10 15

Phe Val Glu Asn Lys Asp Leu Gln Pro Leu Ile Tyr Gly Leu Phe Leu
20 25 30

Ser Met Tyr Leu Val Thr Val Ile Gly Asn Ile Ser Ile Ile Val Ala
35 40 45

Ile Ile Ser Asp Pro Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Phe Ile Ser Thr Thr Val Pro Lys
65 70 75 80

Met Leu Val Asn Ile Gln Thr Gln Asn Asn Val Ile Thr Tyr Ala Gly
85 90 95

Cys Ile Thr Gln Ile Tyr Phe Phe Leu Leu Phe Val Glu Leu Asp Asn
100 105 110

Phe Leu Leu Thr Ile Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Met His Tyr Thr Val Ile Met Asn Tyr Lys Leu Cys Gly Phe Leu
130 135 140

Val Leu Val Ser Trp Ile Val Ser Val Leu His Ala Leu Phe Gln Ser
145 150 155 160

Leu Met Met Leu Ala Leu Pro Phe Cys Thr His Leu Glu Ile Pro His
165 170 175

Tyr Phe Cys Glu Pro Asn Gln Val Ile Gln Leu Thr Cys Ser Asp Ala
180 185 190

Phe Leu Asn Asp Leu Val Ile Tyr Phe Thr Leu Val Leu Leu Ala Thr
195 200 205

Val Pro Leu Ala Gly Ile Phe Tyr Ser Tyr Phe Lys Ile Val Ser Ser
210 215 220

Ile Cys Ala Ile Ser Ser Val His Gly Lys Tyr Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Ser Val Val Ser Leu Phe Tyr Cys Thr Gly Leu
245 250 255

Gly Val Tyr Leu Ser Ser Ala Ala Asn Asn Ser Ser Gln Ala Ser Ala
260 265 270

Thr Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Val Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Ser Val Leu Lys Lys Thr
290 295 300

Leu Cys Glu Glu Val Ile Arg Ser Pro Pro Ser Leu Leu His Phe Phe
305 310 315 320

Leu Val Leu Cys His Leu Pro Cys Phe Ile Phe Cys Tyr
325 330

<210> 72
<211> 313
<212> PRT
<213> Rattus sp. F5

<400> 72

Met Ser Ser Thr Asn Gln Ser Ser Val Thr Glu Phe Leu Leu Leu Gly
1 5 10 15

Leu Ser Arg Gln Pro Gln Gln Gln Gln Leu Leu Phe Leu Leu Phe Leu
20 25 30

Ile Met Tyr Leu Ala Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
35 40 45

Ile Gly Thr Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Val Asp Val Cys Phe Ser Ser Thr Thr Val Pro Lys
65 70 75 80

Val Leu Ala Asn His Ile Leu Gly Ser Gln Ala Ile Ser Phe Ser Gly
85 90 95

Cys Leu Thr Gln Leu Tyr Phe Leu Ala Val Phe Gly Asn Met Asp Asn

100 105 110

Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Val Ala Ile Cys His
115 120 125

Pro Leu His Tyr Thr Thr Lys Met Thr Arg Gln Leu Cys Val Leu Leu
130 135 140

Val Val Gly Ser Trp Val Val Ala Asn Met Asn Cys Leu Leu His Ile
145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Asp Asn Met Ile Pro His
165 170 175

Phe Phe Cys Asp Gly Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Val
195 200 205

Thr Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Cys Ala
210 215 220

Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys Ser Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ala Val Val Cys Leu Phe Tyr Gly Thr Val Ile
245 250 255

Ala Val Tyr Phe Asn Pro Ser Ser Ser His Leu Ala Gly Arg Asp Met
260 265 270

Ala Ala Ala Val Met Tyr Ala Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Ser Asp Met Lys Ala Ala Leu Arg Lys Val
290 295 300

Leu Ala Met Arg Phe Pro Ser Lys Gln
305 310

<210> 73
<211> 311
<212> PRT
<213> Rattus sp. F6

<400> 73

Met Ala Trp Ser Thr Gly Gln Asn Leu Ser Thr Pro Gly Pro Phe Ile
1 5 10 15

Leu Leu Gly Phe Pro Gly Pro Arg Ser Met Arg Ile Gly Leu Phe Leu
20 25 30

Leu Phe Leu Val Met Tyr Leu Leu Thr Val Val Gly Asn Leu Ala Ile
35 40 45

Ile Ser Leu Val Gly Ala His Arg Cys Leu Gln Thr Pro Met Tyr Phe
50 55 60

Phe Leu Cys Asn Leu Ser Phe Leu Glu Ile Trp Phe Thr Thr Ala Cys
65 70 75 80

Val Pro Lys Thr Leu Ala Thr Phe Ala Pro Arg Gly Gly Val Ile Ser
85 90 95

Leu Ala Gly Cys Ala Thr Gln Met Tyr Phe Val Phe Ser Leu Gly Cys
100 105 110

Thr Glu Tyr Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala
115 120 125

Ile Cys Leu Pro Leu Arg Tyr Gly Gly Ile Met Thr Pro Gly Leu Ala
130 135 140

Met Arg Leu Ala Leu Gly Ser Trp Leu Cys Gly Phe Ser Ala Ile Thr
145 150 155 160

Val Pro Ala Thr Leu Ile Ala Arg Leu Ser Phe Cys Gly Ser Arg Val
165 170 175

Ile Asn His Phe Phe Cys Asp Ile Ser Pro Trp Ile Val Leu Ser Cys
180 185 190

Thr Asp Thr Gln Val Val Glu Leu Val Ser Phe Gly Ile Ala Phe Cys
195 200 205

Val Ile Leu Gly Ser Cys Gly Ile Thr Leu Val Ser Tyr Ala Tyr Ile
210 215 220

Ile Thr Thr Ile Ile Lys Ile Pro Ser Ala Arg Gly Arg His Arg Ala
225 230 235 240

Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Leu Ile Trp Tyr Gly
245 250 255

Ser Thr Ile Phe Leu His Val Arg Thr Ser Val Glu Ser Ser Leu Asp
260 265 270

Leu Thr Lys Ala Ile Thr Val Leu Asn Thr Ile Val Thr Pro Val Leu
275 280 285

Asn Pro Phe Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Glu Ala Leu
290 295 300

Arg Arg Thr Val Lys Gly Lys
305 310

<210> 74
<211> 317
<212> PRT
<213> Rattus sp. F12

<400> 74

Met Glu Ser Gly Asn Ser Thr Arg Arg Phe Ser Ser Phe Phe Leu Leu
1 5 10 15

Gly Phe Thr Glu Asn Pro Gln Leu His Phe Leu Ile Phe Ala Leu Phe
20 25 30

Leu Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Met
35 40 45

Ala Ile Ile Thr Gln Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ala Asn Leu Ser Phe Val Asp Ile Cys Phe Thr Ser Thr Thr Ile Pro
65 70 75 80

Lys Met Leu Val Asn Ile Tyr Thr Gln Ser Lys Ser Ile Thr Tyr Glu
85 90 95

Asp Cys Ile Ser Gln Met Cys Val Phe Leu Val Phe Ala Glu Leu Gly
100 105 110

Asn Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Asn Cys
115 120 125

His Pro Leu Cys Tyr Thr Val Ile Val Asn His Arg Leu Cys Ile Leu
130 135 140

Leu Leu Leu Leu Ser Trp Val Ile Ser Ile Phe His Ala Phe Ile Gln
145 150 155 160

Ser Leu Ile Val Leu Gln Leu Thr Phe Cys Gly Asp Val Lys Ile Pro
165 170 175

His Phe Phe Cys Glu Leu Asn Gln Leu Ser Gln Leu Thr Cys Ser Asp
180 185 190

Asn Phe Pro Ser His Leu Ile Met Asn Leu Val Pro Val Met Leu Ala
195 200 205

Ala Ile Ser Phe Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser
210 215 220

Ser Ile His Ser Ile Ser Thr Val Gln Gly Lys Tyr Lys Ala Phe Ser
225 230 235 240

Thr Cys Ala Ser His Leu Ser Ile Val Ser Leu Phe Tyr Ser Thr Gly
245 250 255

Leu Gly Val Tyr Val Ser Ser Ala Val Val Gln Ser Ser His Ser Ala
260 265 270

Ala Ser Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
275 280 285

Phe Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Arg Ala Leu Glu Arg
290 295 300

Leu Leu Glu Gly Asn Cys Lys Val His His Trp Thr Gly
305 310 315

<210> 75
<211> 310

<212> PRT
<213> Rattus sp. I3

<400> 75

```
Met Asn Asn Gln Thr Phe Ile Thr Gln Phe Leu Leu Leu Gly Leu Pro
1               5                  10                  15

Ile Pro Glu Glu His Gln His Leu Phe Tyr Ala Leu Phe Leu Val Met
            20                  25                  30

Tyr Leu Thr Thr Ile Leu Gly Asn Leu Leu Ile Ile Val Leu Val Gln
        35                  40                  45

Leu Asp Ser Gln Leu His Thr Pro Met Tyr Leu Phe Leu Ser Asn Leu
    50                  55                  60

Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys Leu Leu
65                  70                  75                  80

Gln Asn Met Arg Ser Gln Asp Thr Ser Ile Pro Tyr Gly Gly Cys Leu
                85                  90                  95

Ala Gln Thr Tyr Phe Phe Met Val Phe Gly Asp Met Glu Ser Phe Leu
            100                 105                 110

Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu
        115                 120                 125

His Tyr Thr Ser Ile Met Ser Pro Lys Leu Cys Thr Cys Leu Val Leu
    130                 135                 140

Leu Leu Trp Met Leu Thr Thr Ser His Ala Met Met His Thr Leu Leu
145                 150                 155                 160

Ala Ala Arg Leu Ser Phe Cys Glu Asn Asn Val Val Leu Asn Phe Phe
                165                 170                 175

Cys Asp Leu Phe Val Leu Leu Lys Leu Ala Cys Ser Asp Thr Tyr Ile
            180                 185                 190

Asn Glu Leu Met Ile Phe Ile Met Ser Thr Leu Leu Ile Ile Ile Pro
        195                 200                 205

Phe Phe Leu Ile Val Met Ser Tyr Ala Arg Ile Ile Ser Ser Ile Leu
    210                 215                 220

Lys Val Pro Ser Thr Gln Gly Ile Cys Lys Val Phe Ser Thr Cys Gly
225                 230                 235                 240

Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile Gly Leu
                245                 250                 255

Tyr Leu Cys Pro Ala Gly Asn Asn Ser Thr Val Lys Glu Met Val Met
            260                 265                 270

Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
        275                 280                 285
```

Ser Leu Arg Asn Arg Asp Met Lys Arg Ala Leu Ile Arg Val Ile Cys
290 295 300

Ser Met Lys Ile Thr Leu
305 310

<210> 76
<211> 327
<212> PRT
<213> Rattus sp. I7

<400> 76

Met Glu Arg Arg Asn His Ser Gly Arg Val Ser Glu Phe Val Leu Leu
1 5 10 15

Gly Phe Pro Ala Pro Ala Pro Leu Arg Val Leu Leu Phe Phe Leu Ser
20 25 30

Leu Leu Asp Tyr Val Leu Val Leu Thr Glu Asn Met Leu Ile Ile Ile
35 40 45

Ala Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Phe Phe Leu
50 55 60

Ala Asn Met Ser Phe Leu Glu Ile Trp Tyr Val Thr Val Thr Ile Pro
65 70 75 80

Lys Met Leu Ala Gly Phe Ile Gly Ser Lys Glu Asn His Gly Gln Leu
85 90 95

Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Leu Gly Leu
100 105 110

Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr
115 120 125

Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser Arg
130 135 140

Leu Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly Ile
145 150 155 160

Ser Met Val Lys Val Phe Leu Ile Ser Arg Leu Ser Tyr Cys Gly Pro
165 170 175

Asn Thr Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu Asn Leu
180 185 190

Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Val Leu Ala
195 200 205

Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser Tyr Met
210 215 220

Ala Ile Thr Gly Ala Val Met Arg Ile Pro Ser Ala Ala Gly Arg His
225 230 235 240

Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Ile Phe

245 250 255

Tyr Ala Ala Ser Ile Phe Ile Tyr Ala Arg Pro Lys Ala Leu Ser Ala
260 265 270

Phe Asp Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile Val Pro
275 280 285

Leu Phe Asn Pro Ile Ile Tyr Cys Leu Arg Asn Gln Asp Val Lys Arg
290 295 300

Ala Leu Arg Arg Thr Leu His Leu Ala Gln Asp Gln Glu Ala Asn Thr
305 310 315 320

Asn Lys Gly Ser Lys Ile Gly
325

<210> 77
<211> 312
<212> PRT
<213> Rattus sp. I8

<400> 77

Met Asn Asn Lys Thr Val Ile Thr His Phe Leu Leu Leu Gly Leu Pro
1 5 10 15

Ile Pro Pro Glu His Gln Gln Leu Phe Phe Ala Leu Phe Leu Ile Met
20 25 30

Tyr Leu Thr Thr Phe Leu Gly Asn Leu Leu Ile Val Val Leu Val Gln
35 40 45

Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser Asn Leu
50 55 60

Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Leu Lys Leu Leu
65 70 75 80

Gln Asn Ile Gln Ser Gln Val Pro Ser Ile Ser Tyr Ala Gly Cys Leu
85 90 95

Thr Gln Ile Phe Phe Phe Leu Leu Phe Gly Tyr Leu Gly Asn Phe Leu
100 105 110

Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu
115 120 125

His Tyr Thr Asn Ile Met Ser His Lys Leu Cys Thr Cys Leu Leu Leu
130 135 140

Val Phe Trp Ile Met Thr Ser Ser His Ala Met Met His Thr Leu Leu
145 150 155 160

Ala Ala Arg Leu Ser Phe Cys Glu Asn Asn Val Leu Leu Asn Phe Phe
165 170 175

Cys Asp Leu Phe Val Leu Leu Lys Leu Ala Cys Ser Asp Thr Tyr Val
180 185 190

Asn Glu Leu Met Ile His Ile Met Gly Val Ile Ile Ile Val Ile Pro
195 200 205

Phe Val Leu Ile Val Ile Ser Tyr Ala Lys Ile Ile Ser Ser Ile Leu
210 215 220

Lys Val Pro Ser Thr Gln Ser Ile His Lys Val Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile Gly Leu
245 250 255

Tyr Leu Cys Pro Ser Gly Asp Asn Phe Ser Leu Lys Gly Ser Ala Met
260 265 270

Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Gln Ala Leu Ile Arg Val Thr Cys
290 295 300

Ser Lys Lys Ile Ser Leu Pro Trp
305 310

<210> 78
<211> 314
<212> PRT
<213> Rattus sp. I9

<400> 78

Met Thr Arg Arg Asn Gln Thr Ala Ile Ser Gln Phe Phe Leu Leu Gly
1 5 10 15

Leu Pro Phe Pro Pro Glu Tyr Gln His Leu Phe Tyr Ala Leu Phe Leu
20 25 30

Ala Met Tyr Leu Thr Thr Leu Leu Gly Asn Leu Ile Ile Ile Ile Leu
35 40 45

Ile Leu Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Pro Tyr Ala Gly
85 90 95

Cys Leu Ala Gln Ile Tyr Phe Phe Leu Phe Phe Gly Asp Leu Gly Asn
100 105 110

Phe Leu Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu His Tyr Met Ser Ile Met Ser Pro Lys Leu Cys Val Ser Leu
130 135 140

Val Val Leu Ser Trp Val Leu Thr Thr Phe His Ala Met Leu His Thr
145   150   155   160

Leu Leu Met Ala Arg Leu Ser Phe Cys Glu Asp Ser Val Ile Pro His
                165   170   175

Tyr Phe Cys Asp Met Ser Thr Leu Leu Lys Val Ala Cys Ser Asp Thr
            180   185   190

His Asp Asn Glu Leu Ala Ile Phe Ile Leu Gly Gly Pro Ile Val Val
        195   200   205

Leu Pro Phe Leu Leu Ile Ile Val Ser Tyr Ala Arg Ile Val Ser Ser
    210   215   220

Ile Phe Lys Val Pro Ser Ser Gln Ser Ile His Lys Ala Phe Ser Thr
225   230   235   240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Val Ile
                245   250   255

Gly Leu Tyr Leu Cys Pro Ser Ala Asn Asn Ser Thr Val Lys Glu Thr
            260   265   270

Val Met Ser Leu Met Tyr Thr Met Val Thr Pro Met Leu Asn Pro Phe
        275   280   285

Ile Tyr Ser Leu Arg Asn Arg Asp Ile Lys Asp Ala Leu Glu Lys Ile
    290   295   300

Met Cys Lys Lys Gln Ile Pro Ser Phe Leu
305   310

<210> 79
<211> 312
<212> PRT
<213> Rattus sp. I14

<400> 79

Met Thr Gly Asn Asn Gln Thr Leu Ile Leu Glu Phe Leu Leu Leu Gly
1   5   10   15

Leu Pro Ile Pro Ser Glu Tyr His Leu Leu Phe Tyr Ala Leu Phe Leu
            20   25   30

Ala Met Tyr Leu Thr Ile Ile Leu Gly Asn Leu Leu Ile Ile Val Leu
        35   40   45

Val Arg Leu Asp Ser His Leu His Met Pro Met Tyr Leu Phe Leu Ser
    50   55   60

Asn Leu Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65   70   75   80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Ser Tyr Thr Gly
                85   90   95

Cys Leu Thr Gln Leu Tyr Phe Phe Met Val Phe Gly Asp Met Glu Ser

100 105 110

Phe Leu Leu Val Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu Arg Tyr Thr Thr Ile Met Ser Thr Lys Phe Cys Ala Ser Leu
130 135 140

Val Leu Leu Leu Trp Met Leu Thr Met Thr His Ala Leu Leu His Thr
145 150 155 160

Leu Leu Ile Ala Arg Leu Ser Phe Cys Glu Lys Asn Val Ile Leu His
165 170 175

Phe Phe Cys Asp Ile Ser Ala Leu Leu Lys Leu Ser Cys Ser Asp Ile
180 185 190

Tyr Val Asn Glu Leu Met Ile Tyr Ile Leu Gly Gly Leu Ile Ile Ile
195 200 205

Ile Pro Phe Leu Leu Ile Val Met Ser Tyr Val Arg Ile Phe Phe Ser
210 215 220

Ile Leu Lys Phe Pro Ser Ile Gln Asp Ile Tyr Lys Val Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Thr Leu Phe Tyr Gly Thr Ile Phe
245 250 255

Gly Ile Tyr Leu Cys Pro Ser Gly Asn Asn Ser Thr Val Lys Glu Ile
260 265 270

Ala Met Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Arg Ala Leu Ile Arg Val
290 295 300

Ile Cys Thr Lys Lys Ile Ser Leu
305 310

<210> 80
<211> 314
<212> PRT
<213> Rattus sp. I15

<400> 80

Met Thr Glu Glu Asn Gln Thr Val Ile Ser Gln Phe Leu Leu Leu Phe
1 5 10 15

Leu Pro Ile Pro Ser Glu His Gln His Val Phe Tyr Ala Leu Phe Leu
20 25 30

Ser Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Ile Ile Ile Ile Leu
35 40 45

Ile His Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Pro Phe Ala Gly
85 90 95

Cys Leu Thr Gln Leu Tyr Phe Tyr Leu Tyr Phe Ala Asp Leu Glu Ser
100 105 110

Phe Leu Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu His Tyr Met Ser Ile Met Ser Pro Lys Leu Cys Val Ser Leu
130 135 140

Val Val Leu Ser Trp Val Leu Thr Thr Phe His Ala Met Leu His Thr
145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Asp Asn Met Ile Pro His
165 170 175

Phe Phe Cys Asp Ile Ser Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

His Val Asn Glu Leu Val Ile Phe Val Met Gly Gly Leu Val Ile Val
195 200 205

Ile Pro Phe Val Leu Ile Ile Val Ser Tyr Ala Arg Val Val Ala Ser
210 215 220

Ile Leu Lys Val Pro Ser Val Arg Gly Ile His Lys Ile Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile
245 250 255

Gly Leu Tyr Leu Cys Pro Ser Ala Asn Asn Ser Thr Val Lys Glu Thr
260 265 270

Val Met Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu Ile Arg Val
290 295 300

Leu Cys Lys Lys Lys Ile Thr Phe Cys Leu
305 310